

REMARKS

Claims 1-12 were presented for examination with claims 1-3, 5-10 and 12 being rejected. Claims 4 and 11 are also identified as rejected but no grounds are stated. The drawings and specification have been objected to. This amendment amends all claims to better claim that which the applicant regards as the invention, adds claims 13-20, provides a new set of drawings for which approval is requested and provides a new specification. No new matter is involved.

Claim 1 has been amended to more clearly and definitely claim that which applicant regards as the invention. As amended claim 1 recites "an elongated rigid frame having an X-shaped cross section with four elongated walls that are rigidly joined along an elongated central portion of the cross section". This language clearly distinguishes over U.S. patent 5,881,468 to Baumann. While Baumann's frame might be considered X shaped in cross section, it is hinged, not rigid. Furthermore, the central portion of the cross section is not elongated as recited in claim 1. The Baumann level is elongated transverse to the central portion of the X shaped cross section, not along the central portion of the cross section.

Claims 2-12 depend from claim 1 and incorporate by reference the distinguishing features of claim 1. Claim 2 recites a length of at least 6 inches. The length means in the direction of elongation. Claim 3 further recites a pivotally mounted level indicating bubble vial and claim 4 recites two pivotally mounted level indicating bubble vials.

Claim 5 further recites first and second bubble vials fixedly mounted on the frame. Claim 6 further recites a bubble vial having an orientation of 45 degrees relative to the direction of elongation. Claim 7 further recites the level indicating bubble vial as being removable. Claim 8 defines the orientation of the bubble vial at 45 degrees and recites a second bubble vial that is oriented parallel to the direction of elongation. Claim 9 recites two bubble vials that are oriented parallel to the direction of elongation in addition to the 45 degree bubble vial.

Claim 10 further recites front and back 90 degree V grooves plus front and rear handle moldings supporting level indicating bubble vials. Claim 11 further recites front and rear handle moldings supporting level indicating bubble vials that are oriented parallel to the direction of elongation and in opposing relationship. Claim 1 further recites scratch resistant end caps while claim 13 recites front and rear handle moldings supporting bubble vials with the front handle molding also supporting at least one magnet.

Claim 14 is an independent claim and clearly distinguishes Baumann by reciting "an X-shaped cross section with four elongated walls that are rigidly joined along an elongated central portion of the cross section". Claims 15-19 depend from claim 14 and recited further distinguishing features.

Claim 15 further recites front and back 90 degree V grooves plus front and rear handle moldings supporting bubble vials. Claim 16 further recites a length of at least 60 inches. Claim 17 further recites a pivotally mounted level indicating vial and claim 18 further recites two pivotally mounted level indicating vials.

Claim 19 further recites first and second bubble vials fixedly mounted on the frame in opposing relationship with an orientation parallel to the direction of elongation.

Claim 20 is an independent claim that recites the level in considerable detail, including "an elongated rigid frame extending along a direction of elongation and having an X-shaped cross section " and " four elongated generally rectangular walls that are joined along an elongated central portion of the cross section".

The specification has been amended at page 1 to change patent number "238,153" to --D238,153-- as required by the office action.

At multiple locations the angle between facing surfaces of the X-shaped from, which is sometimes referred to as a V groove, has been changed from "45-degrees" to --90-degrees-- to correct an obvious error and describe the shape as it is clearly shown in the original drawings.

At page two the description of simultaneously plumbing has been clarified. The awkward reference to two 45 degree angles has been changed to simultaneous plumbing both sides of a 90 degree corner. This feature is clearly illustrated in original Fig. 2. The reference to the 45 degree bubble vials has been grammatically corrected. Corresponding clarifications have been made in the Brief Summary of the Invention and in the Detailed Description.

The specification has been amended to correct a number of grammatical errors.

Language has been added to the Brief Description to provide antecedent

basis for claim language to enable the applicant to more clearly and definitely claim that which the applicant regards as the invention. Since this language reflects that which was described in the specification and shown in the drawings of the original application, no new matter is involved.

Reference numerals have been changed to provide consistency between the specification and the drawings and to reference additional drawing features which were shown in the original drawings or described in the original specification.

The Detailed Description has been amended to provide a more specific identification of various features, in conjunction with increased use of reference numerals. Since the features were described and shown in the drawings of the original application. No new matter is involved.

The drawings have been amended as required by the Office Action. Virtually all reference numerals have been changed to reflect the more extensive use of reference numerals in the Detailed Description.

In Fig. 1 solid shading has been removed at several locations that have been encircled in red and the reference numerals have been changed to match the revised specification. Arrows have been added to illustrate the plane of the sectional view of Fig. 3.

In Fig. 2 solid shading has been removed at several locations that have been encircled in red and the reference numerals have been changed to match the revised specification. The work piece has been shown in all dashed line outline, the erroneous "45-degree" indication has been corrected to --90-

degrees-- and the word "post" has been removed. The orientation of the reference numerals and figure number have been changed to provide consistence with Fig. 1.

In Fig. 3 solid shading has been removed at several locations that have been encircled in red and the reference numerals have been changed to match the revised specification. The orientation has been inverted to provide consistency with Figs. 1 and 2, and alternative extended positions of the flip out brackets and bubble vials have been shown in dashed outline instead of solid outline.

In Fig. 4 solid shading has been removed at several locations that have been encircled in red and the reference numerals have been changed to match the revised specification. The orientation has been inverted to provide consistency with Fig. 1, 2 and 3.

In Fig. 5 solid shading has been removed at several locations that have been encircled in red and the reference numerals have been changed to match the revised specification. The orientation has been inverted to provide consistency with Fig. 1, 2, 3 and 4.

In Fig. 6 the shading has been modified as shown in red and an end cap has been shown as encircled in red for consistency with Figs. 1-5. The reference numerals have been changed to match the revised specification.

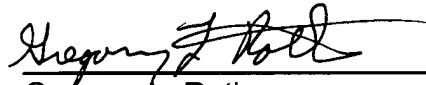
No new matter is involved.

REPORT ON EXAMINER TELEPHONE INTERVIEW

On or about August 2004 the applicant had a helpful and courteous telephone interview with Examiner Tania Courson. Examiner Courson provided some helpful suggestions for modifying the application to overcome the objections and rejections in the Office Action dated June 4, 2004.

Respectfully submitted,

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In the Drawings:

Please amend the drawings by substituting the attached 6 replacement sheets for the original 6 sheets of drawings. The drawing changes are indicated in red in the attached Annotated Marked-up Drawings. ✓

Please amend claim 1-12 as follows:

1. (Currently amended) ~~Multi Plane Plumb Level for the use of plumbing and leveling in general construction~~ A level comprising:

an elongated rigid frame having an X-shaped cross section with four elongated walls that are rigidly joined along an elongated central portion of the cross section extending outward from the elongated central portion of the cross section; and

a level indicating bubble vial secured to the frame and indicating when the frame has a particular orientation.

2. (Currently amended) ~~Multi Plane Plumb Level of lengths including but not limited to 6", 12", 24", 36", and 60"~~ A level according to claim 1, wherein the frame has a length of at least 6 inches in the direction of elongation.

3. (Currently amended) ~~Multi Plane Plumb Level constructed with intersecting 45-degree sections~~ A level according to claim 1, further comprising a pivotally mounted level indicating bubble vial hingedly mounted on one of the elongated walls near an outer edge thereof, the pivotally mounted level indicating vial being pivotable between a secured position in which the pivotally mounted level indicating vial extends between the outer edges of two elongated walls and an extended position in which the pivotally mounted level indicating vial extends outward from the one wall to form an extension of the one wall.

4. (Currently amended) ~~Multi Plane Plum Level comprised of two opposing swivel bubble vials to read vertical planes and open to measure 45-degree intersections or post plumb in upright positions~~ A level according to claim 1, further comprising two pivotally mounted level indicating bubble vials mounted on opposite sides of the frame, each pivotally mounted level indicating vial being pivotally mounted on one of the elongated walls near an outer edge thereof and being pivotable between a secured position in with the pivotally mounted level indicating vials extend between the outer edges of two elongated walls in opposed relationship to each other and an extended position in which the pivotally mounted level indicating vials extend outward to form an extensions of the walls on which the level indicating vials are pivotally mounted.

5. (Currently amended) ~~Multi Plane Plum Level comprised of two central located vials for measurement of horizontal planes~~ A level according to claim 1, further comprising first and second bubble vials fixedly mounted on the frame in opposing relationship to one another with an orientation that is parallel to the direction of elongation.

6. (Currently amended) ~~Multi Plane Plum Level with inverted opposing 45-degree angled plumb vials housed in a round embodiment for the measurement and alignment of 45-degree planes~~ A level according to claim 1, wherein the level indicating bubble vial has an orientation of 45-degrees relative to the direction of elongation.

7. (Currently amended) ~~Multi Plane Plum Level with 45-degree vials that can be removed, used as a line level, and returned to its position for easy storage and accessibility~~ A level according to claim 1, wherein the level indicating bubble vial is removable from the frame.

8. (Currently amended) ~~Multi Plane Plum Level with 45-degree vials that make it more accurate on the working plane than a bull's eye bubble~~ A level according to claim 1, wherein the level indicating bubble vial has an orientation of 45 degrees relative to the direction of elongation and further comprising a second level indicating bubble vial fixedly secured to the frame with an orientation in a direction parallel to the direction of elongation.

9. (Currently amended) ~~Multi Plane Plumb Level with a 45-degree (V) groove allowing the level to balance with no support on no flat objects including or not limited to piping, round fencing, and apexes~~ A level according to claim 1, wherein the level indicating bubble vial has an orientation of 45 degrees relative to the direction of elongation and further comprising second and third level indicating bubble vials fixedly secured to the frame in opposing relationship to one another with an orientation in a direction parallel to the direction of elongation.

10. (Currently amended) ~~Multi Plane Plum Level with a 45-degree (V) groove, which aids in leveling odd angled surfaces with its deep centerline~~ A level according to claim 1, wherein the frame walls define front and back 90 degree V grooves disposed in opposing relationship and further comprising:

a front handle molding secured within the front V groove and supporting the level indicating bubble vial; and

a rear handle molding secured within the rear V groove and supporting a rear level indicating bubble vial.

11. (Currently amended) ~~Multi Plane Plum Level equipped with two opposing central handle moldings attached to the middle standard, which embody magnets, which allow the invention to adhere to metal surfaces for hands-free maneuverability~~ A level according to claim 1, wherein the frame walls define front and back 90 degree V grooves disposed in opposing relationship and further comprising:

a front handle molding secured within the front V groove and supporting the level indicating bubble vial, the level indicating bubble vial being oriented in a direction parallel to the direction of elongation; and

a rear handle molding secured within the rear V groove and supporting a rear level indicating bubble vial, the rear level indicating bubble vial being oriented in a direction parallel to the direction of elongation and being in opposing relationship to the first mentioned level indicating bubble vial.

12. (Currently amended) ~~Multi Plane Plum Level with protective end caps on the extreme ends of the (X) shaped standard member comprised of material including but not limited to rubber, which resists shock, scratch damage, and electrical conductivity~~ A level according to claim 1, wherein scratch resistant end caps are secured to each end of the frame.

Please add claims 13-20 as follows:

13. (New) (Currently amended) A level according to claim 1, wherein the frame walls define front and back 90 degree V grooves disposed in opposing relationship and further comprising:

a front handle molding secured within the front V groove and supporting the level indicating bubble vial and at least one magnet; and

a rear handle molding secured within the rear V groove and supporting a rear level indicating bubble vial.

14. (New) A level comprising:

an elongated rigid frame having an X-shaped cross section with four elongated walls that are rigidly joined along an elongated central portion of the cross section and rotationally spaced at 90-degree angles around the central portion of the cross section, the elongated walls extending outward from the elongated central portion; and

a level indicating vial secured to the frame and indicating when the frame has a particular orientation.

15. (New) A level according to claim 14, wherein the frame walls define front and back 90 degree V grooves disposed in opposing relationship and further comprising:

a front handle molding secured within the front V groove and supporting the level indicating bubble vial; and

a rear handle molding secured within the rear V groove and supporting a rear level indicating bubble vial.

16. (New) A level according to claim 14, wherein the frame has a length of at least 60 inches in the direction of elongation.

17. (New) A level according to claim 14, further comprising a pivotally mounted level indicating bubble vial hingedly mounted on one of the elongated walls near an outer edge thereof, the pivotally mounted level indicating vial being pivotable between a secured position in which the pivotally mounted level indicating vial extends between the outer edges of two elongated walls and an extended position in which the pivotally mounted level indicating vial extends outward from the one wall to form an extension of the one wall.

18. (New) A level according to claim 14, further comprising two pivotally mounted level indicating vials mounted on opposite sides of the frame, each pivotally mounted level indicating vial being pivotally mounted on one of the elongated walls near an outer edge thereof and being pivotable between a secured position in which the pivotally mounted level indicating vials extend between the outer edges of two elongated walls in opposed relationship to each other and an extended position in which the pivotally mounted level indicating vials extend outward to form an extensions of the walls on which the level indicating vials are pivotally mounted.

19. (Currently amended) A level according to claim 14, further comprising first and second bubble vials fixedly mounted on the frame in opposing relationship to one another with an orientation that is parallel to the direction of elongation.

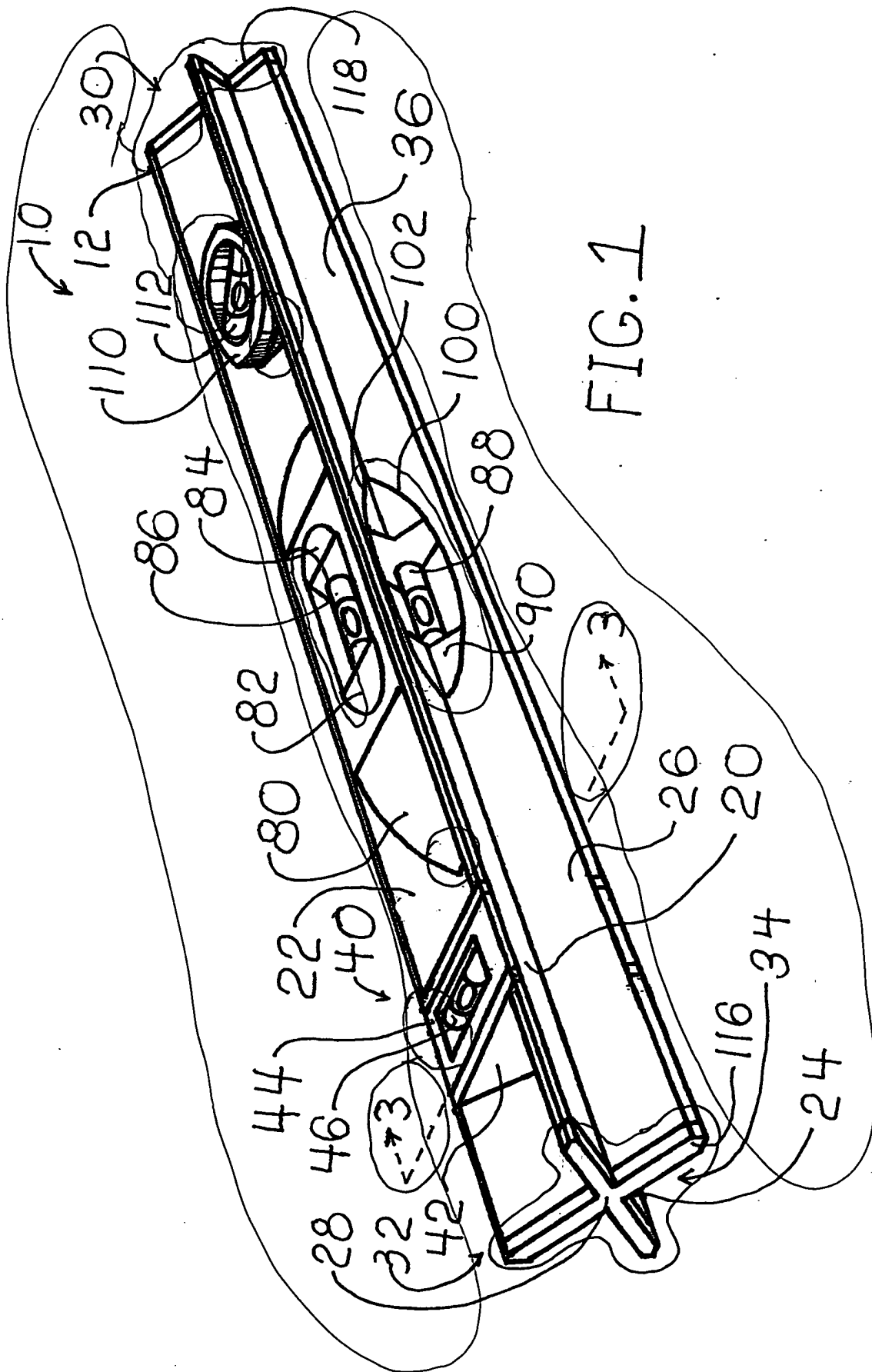
20. (New) A level comprising:

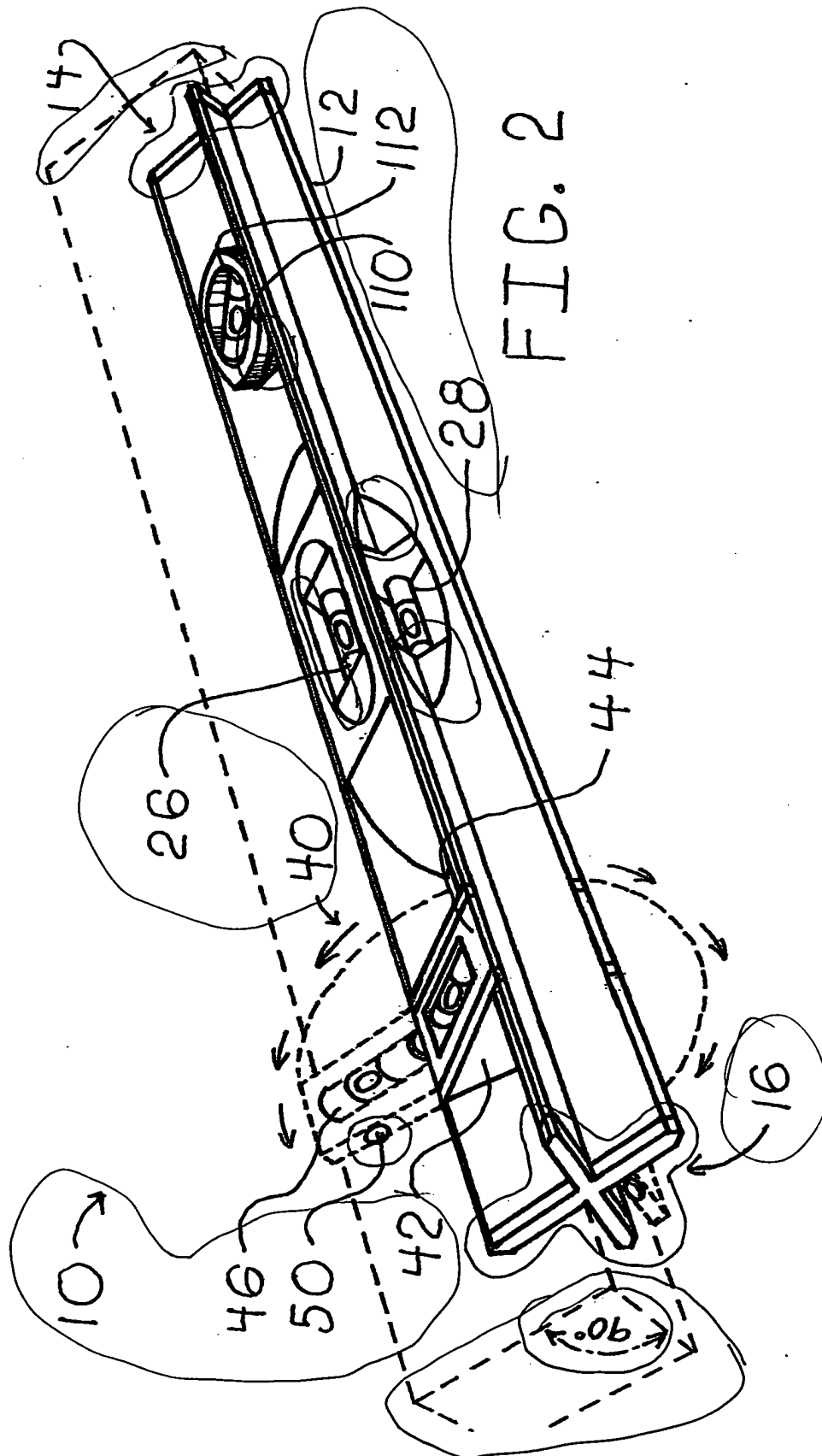
an elongated rigid frame extending along a direction of elongation and having an X-shaped cross section, the frame having four elongated generally rectangular walls that are rigidly joined along an elongated central portion of the cross section, the elongated walls extending outward from the elongated central portion of the cross section and being rotationally uniformly spaced around the elongated central portion of the cross section, the walls forming 90-degree V grooves between facing pairs of walls, the V grooves including a front V groove and an opposing rear V groove;

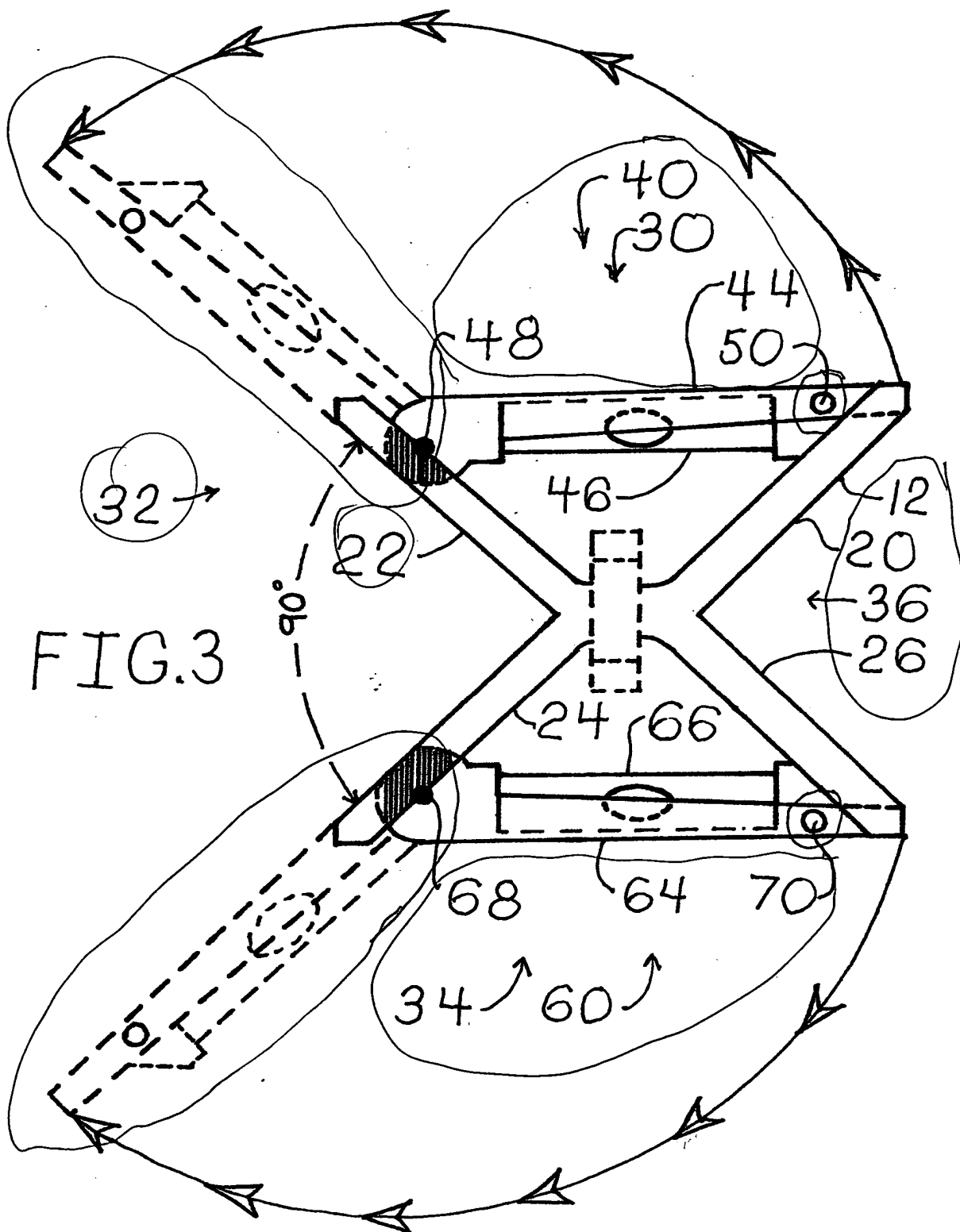
first and second bubble vials, the first and second bubble vials being flip out level indicating bubble vials hingedly secured to different walls of the frame with an orientation transverse to the direction of elongation, the first and second bubble vials being rotatable between a secured position in which the first and second bubble vials are disposed in opposing relationship to one another within the front and rear V grooves, respectively, and an extended position in which the first and second bubble vials each form an extension of a wall to which the bubble vial is secured;

second and third bubble vials disposed in opposing relationship within the front and back grooves, respectively, of the frame with an orientation that is parallel to the elongated central portion of the cross section, the four walls each having an aperture formed therein at a location that enables the second and third bubble vials to be viewed from both sides of the frame; and

fifth and sixth bubble vials disposed in opposing relationship with the front and back grooves, respectively, the fifth and sixth bubble vials being oriented at an angle of 45-degrees to the direction of elongation







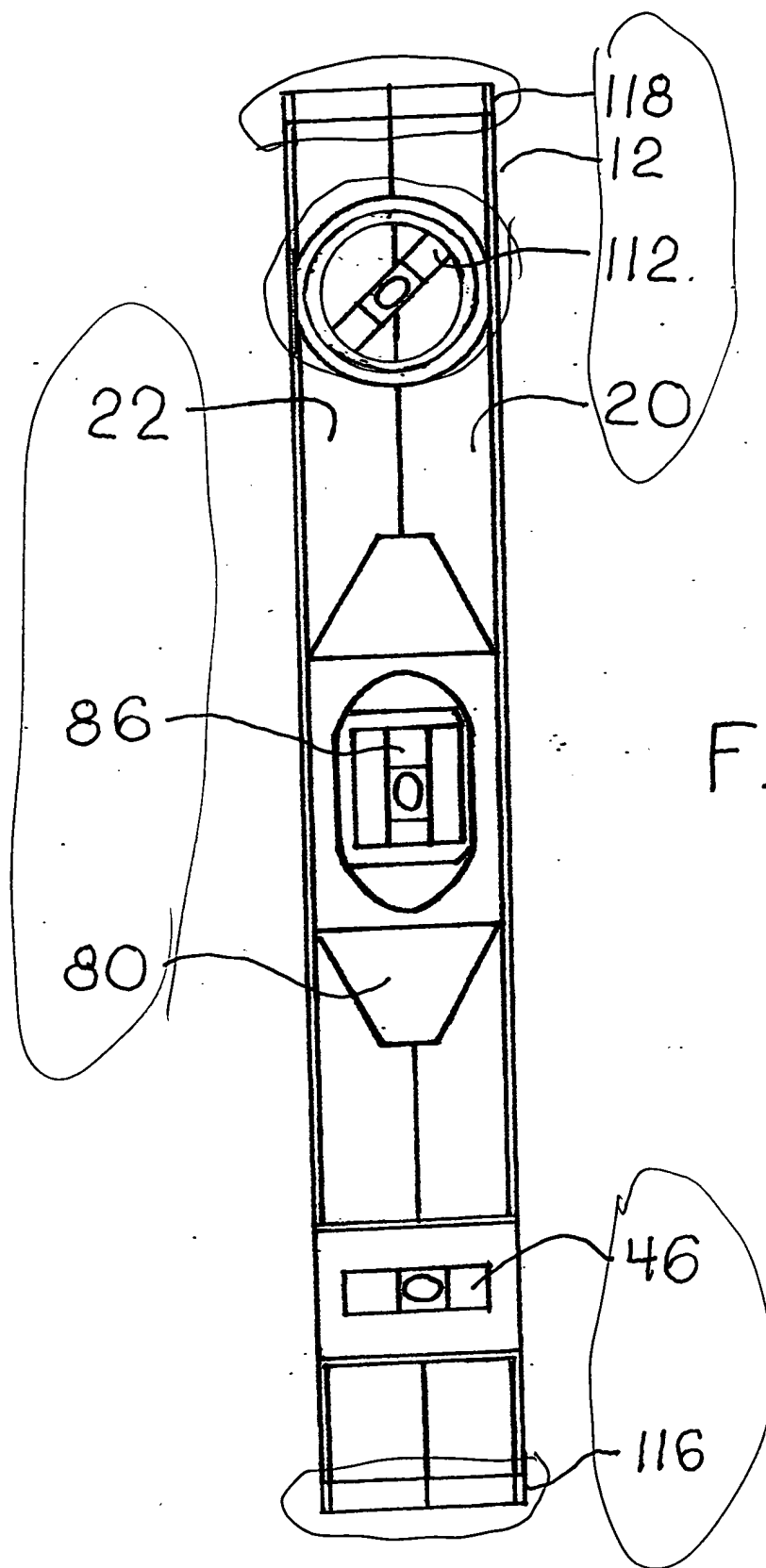
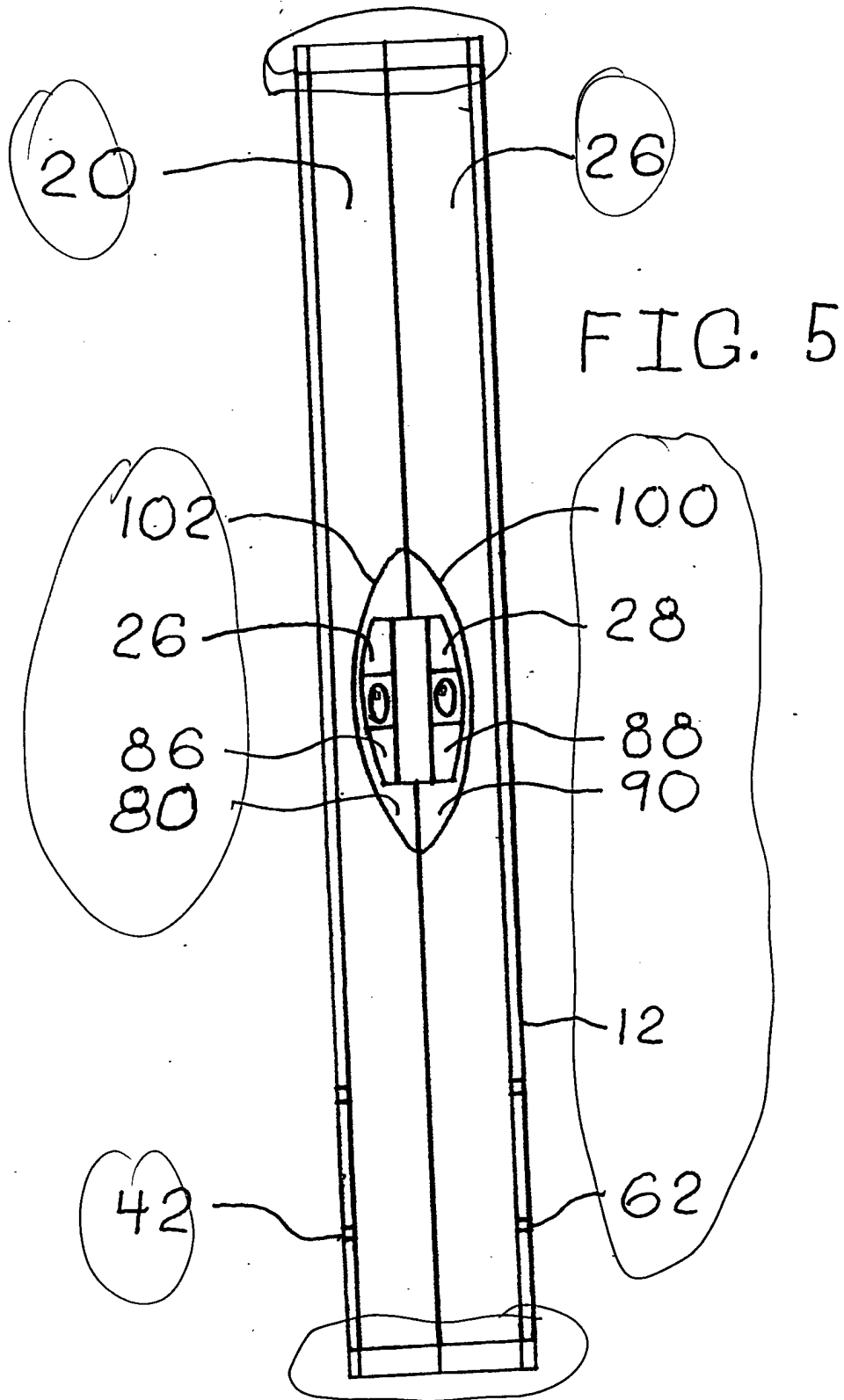


FIG. 4



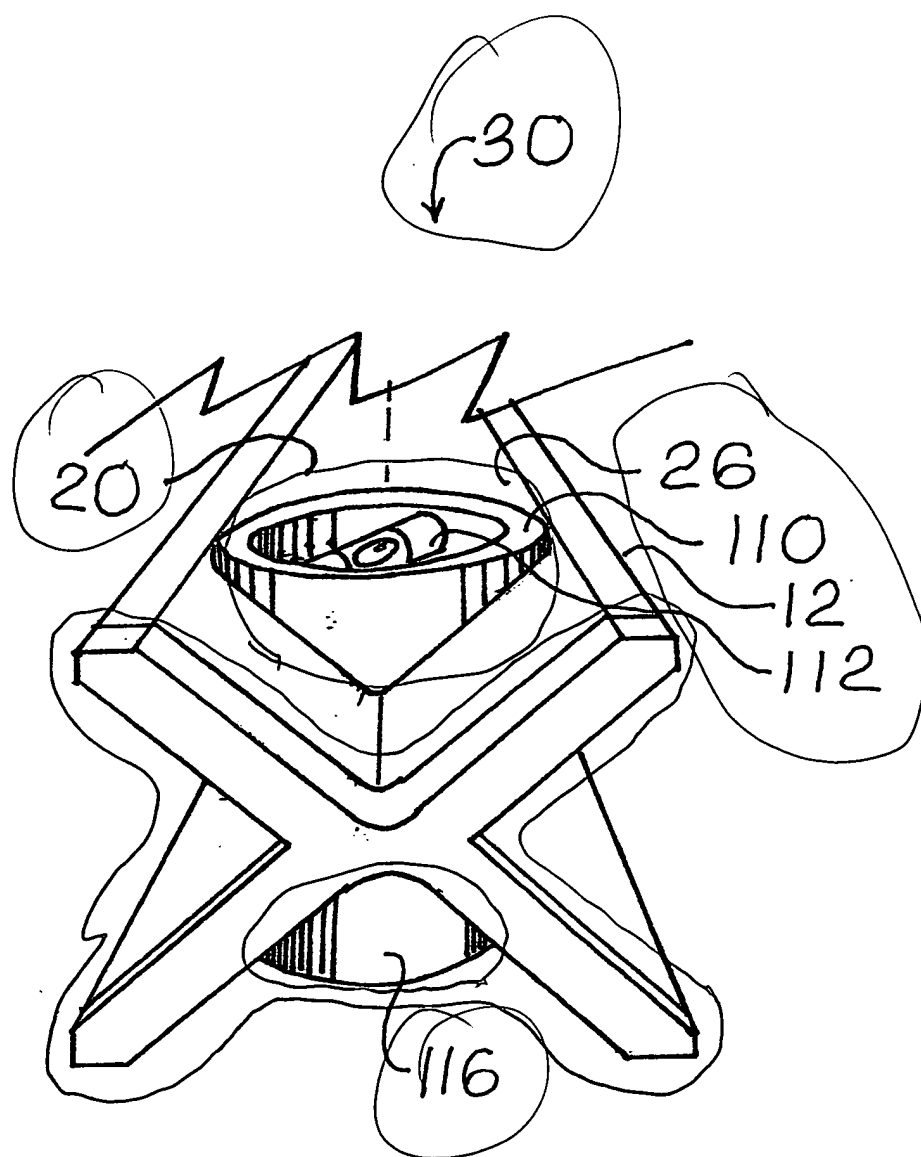


FIG. 6